

First Quarter of FY 1999 Report  
(October 1998 through December 1998)

# CALIFORNIA BAY-DELTA ECOSYSTEM RESTORATION FUND

June 28, 1999

Bureau of Reclamation  
United States Department of the Interior



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## INTRODUCTION

House Report 105-190, which accompanied H.R. 2203, the FY 1998 Energy and Water Development Appropriations Bill, requires that the Department of the Interior submit a quarterly report to the Committees on Appropriations on how the funds appropriated for the California Bay-Delta Ecosystem Restoration program are being utilized. The report is to include a description of each project to be undertaken, its cost, and the agency to which funds were provided to carry out the project. This First Quarterly Report of FY 1999 covers activities undertaken during the period of October 1, 1998 through December 31, 1998.

The Bureau of Reclamation, working with the other Federal agencies participating in the CALFED Bay-Delta Program, prepared the following report in response to that requirement. A similar report will be prepared following the conclusion of each quarter and provided to the Committees and other interested parties.

## **FIRST QUARTER HIGHLIGHTS**

### Proposal Solicitation Package Status:

Negotiations for four programs (the Fish Passage Program, the Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program, the Watershed Restoration Planning and Implementation Program, and the Bay-Delta Education Program) began in earnest in October. Concurrently, CALFED Program Staff, in coordination with participating CALFED agencies, began development of the FY 1999 Public Solicitation Package. Issue date is scheduled in February of 1999.

### FY 1999 Project Selection:

In December 1998, the Integration Panel met to discuss project selection for FY 1999 funding. The Integration Panel identified significant gaps between the Ecosystem Restoration Plan (ERP) goals and FY 1998 funding patterns. CALFED Program Staff, working with direction from the Integration Panel, identified high priority projects to address the ERP gaps. CALFED Program Staff will prepare the final high priority list for presentation to the Ecosystem Roundtable and for Policy Group review and recommendation in the Second Quarter of FY 1999.

**Federal Bay-Delta Account**  
(Dollars in Thousands)

	Total Allocated	Total Obligated	Total Expended (as of 12/31/98)
Fish Screen Improvements	\$2,539	\$1,639	\$14
Fish Passage Improvements	8,325	2,437	349
Habitat Restoration in Floodplains and Marshes	35,542	32,842	3,609
River Channel Changes	9,624	9,624	243
Improved Instream Flows	14,500	14,450	0
Water Quality and Temperature Improvement	5,003	5,003	692
Introduced and Undesirable Species Control	1,250	1,250	0
Improved Fish Management and Hatchery Operations	625	625	0
Watershed Management	2,798	2,253	61
Monitoring, Permit Coordination, and Other Special Support	6,930	3,043	1,235
Miscellaneous Expenses/Administration	8,422	223	222
<b>GRAND TOTAL</b>	<b>\$95,558</b>	<b>\$73,389</b>	<b>\$6,424</b>

**FY 1999 FIRST QUARTER STATUS FOR**  
**THE FEDERAL BAY-DELTA ACCOUNT**

This section provides a description of each of the projects and programs that have been funded or recommended for funding from the Federal Bay-Delta account, as well as a summary of accomplishments and obligations during the first quarter of FY 1999. All projects or programs listed here have been reviewed and recommended through the CALFED process - review and comment by the Ecosystem Roundtable, Bay Delta Advisory Council, and the CALFED Policy Group with final authorization provided through the Department of the Interior. A summary table showing the status of funds for each project and program as of December 31, 1998, is

provided as Appendix A. A complete Federal Bay-Delta Account map is included as Appendix B. CALFED Program Staff has provided a comprehensive CALFED project list included within this First Quarter Report for FY 1999 as Appendix C.

**Fish Screen Improvements:**

<b>CALFED Recommended level of funding:</b>	<b>\$2,539,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$1,639,000</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$14,381</b>

**1) Project Title:** Woodbridge Fish Screen and Passage

CALFED Recommended Level of Funding:	\$1,575,000
Total Funds Obligated Through December 31, 1998:	1,575,000
Total Funds Expended Through December 31, 1998:	14,381

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The primary goals for this program on the Lower Mokelumne River are to implement key elements of existing resource management plans of CALFED, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game to increase fall-run chinook salmon and steelhead populations, enhance critical and limited aquatic habitats, and restore riparian ecosystem integrity and diversity. Three specific tasks will be funded through the Bay-Delta Ecosystem Restoration Appropriation: Task One involves the environmental clearance and permitting for fish passage improvements at Woodbridge Dam; Task Two provides the final design of fish passage improvements at Woodbridge Dam; and Task Three provides the final design for the Woodbridge Irrigation District and the North San Joaquin Water Conservation District fish screen improvements. The U.S. Bureau of Reclamation will work in coordination with the Woodbridge Irrigation District and the City of Lodi to accomplish this project.

Expected Project Completion Date: December 31, 1999

**First Quarter Accomplishments:**

The MRTAC Workgroup and sponsors (Woodbridge Irrigation District & City of Lodi) have completed a portion of the EIS/EIR regarding alternatives to the proposed project. Fourteen alternatives were evaluated and five were selected to be carried forward in the EIS/EIR. Future meeting dates are scheduled.

**2) Program Title:** Small Diversion Fish Screens Program

CALFED Recommended Level of Funding:	\$900,000
Total Funds Obligated Through December 31, 1998:	\$0
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** Natural Resource Conservation Service

**Project Description:** The Natural Resource Conservation Service (NRCS) oversees an existing small fish screen program which works with local organizations and diverters to prioritize and screen small diversions from the Sacramento and San Joaquin Rivers and their

tributaries. Funding requested under the Bay-Delta Ecosystem Restoration Appropriation will allow NRCS to expand the program. This program will be coordinated with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, state and local agencies, other local groups such as the Family Water Alliance, and local watershed conservancies.

Project Selection: February 26, 1998

Final Project Selection: Pending negotiations

Interagency Agreement Signed by Applicant: Pending negotiations.

Funds Obligated in Federal Financial System: Pending outcome of the negotiations

Expected Project Completion Date: Pending program development

**First Quarter Accomplishments:**

Negotiations on the agreement are progressing. We anticipate a signed agreement prior to the issuance of the CALFED Public Solicitation due out in February 1999. Project selection will be made through the February solicitation.

3) **Project Title:** Richter Brothers Anadromous Fish Screen

CALFED Recommended Level of Funding: \$49,000

Total Funds Obligated Through December 31, 1998: \$49,000

Total Funds Expended Through December 31, 1998: \$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Richter Brothers operate an unscreened 25 cubic feet per second diversion on the Sacramento River near Knights Landing. This project includes evaluating screening alternatives, completing environmental documentation, obtaining permits, and preparing design plans. The U.S. Bureau of Reclamation will coordinate with the Richter Brothers to accomplish this project.

Expected Project Completion Date: January 31, 1999

**First Quarter Accomplishments:**

Richter Brothers requested and received aerial photographs to compliment physical surveys taken during the quarter. Richter Brother's representatives attended a demonstration of the U.S. Bureau of Reclamation Flat Plate Screening. We initiated background development of the required environmental documentation to proceed with a screening project. Initiated conceptual layouts of alternatives.

4) **Project Title:** Boeger Family Farms Fish Screen, Phase I

CALFED Recommended Level of Funding: \$15,000

Total Funds Obligated Through December 31, 1998: \$15,000

Total Funds Expended Through December 31, 1998: \$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Boeger Family Farm proposes to install fish screens on its pumping plant on the Sacramento River near Colusa. The fish screen would reduce entrainment of priority species at the Boeger Family Farms pumping plant. Priority species include steelhead and various chinook salmon runs (winter-run, spring-run, and late-fall run). The U.S. Bureau



of Reclamation will work with the Boeger Family Farm to complete the feasibility study requested in Phase I of the project. Upon completion of the feasibility study, a request to fund construction of the proposed fish screen will be presented to CALFED for funding consideration.

Expected Project Completion Date: January 31, 1999

**First Quarter Accomplishments:**

Completed site surveys for both engineering and biological evaluations. Fish screens alternatives have been developed and are currently being analyzed. The draft CEQA document is nearly complete.

**Fish Passage Improvements:**

<b>CALFED Recommended Level of Funding:</b>	<b>\$8,325,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$2,437,234</b>
<b>Total Funds expended Through December 31, 1998:</b>	<b>\$349,234</b>

**1) Program Title:** Fish Passage Program

CALFED Recommended Level of Funding:	\$8,000,000
Total Funds Obligated Through December 31, 1998:	\$2,112,234
Total Funds Expended Through December 31, 1998:	\$24,234

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This program will identify and implement additional fish passage projects at locations such as McCormick-Saeltzer Dam on Clear Creek and at Coleman National Fish Hatchery on Battle Creek. The U.S. Bureau of Reclamation will coordinate with CALFED staff, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other interested agencies or private entities to meet the goals of this program. The following four items are included within the Fish Passage Program (items A through D):

**A) Status of the Proposal Solicitation Package of May 8, 1998 (PSP)**

CALFED Recommended Level of Funding:	\$5,912,000
Total Funds Obligated Through December 31, 1998:	\$24,234
Total Funds Expended Through December 31, 1998:	\$24,234

**Funding Provided to:** Bureau of Reclamation

**Project Description:** In May 1998, CALFED issued a Proposal Solicitation Package requesting proposals to assess fish passage problems and associated problems with migration delays, stranding, and straying and to identify solutions. The assessment of problems and identification of solutions can be accomplished through cooperative efforts to conduct the assessments necessary to identify small diversion dams which are appropriate for removal or consolidation and small diversion dams which need to be replaced or modified with fish-friendly structures. Cooperative efforts can include developing expert work groups to work with local efforts and programs. Proposals can address the entire Bay-Delta watershed or can concentrate on smaller areas within the geographic area of consideration.

**Project Selection Process:** April 2, 1998

**Final Project Selection:** September 14, 1998

First Quarter Accomplishments:

Began contract negotiations with nine project proponents as follows<sup>1</sup> -

<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
Anadromous Fish Passage at Clough Dam on Mill Creek	\$1,280,000	California Department of Water Resources
Fish Passage Improvement Project at the Red Bluff Diversion Dam	340,600	Tehama-Colusa Canal Authority
Steelhead and Chinook Salmon Fish Passage Barrier Remediation on the Guadalupe River	178,200	The Natural Heritage Institute
Anderson-Cottonwood Irrigation District Fish Passage and Fish Screen Improvement, Phase II	860,000	Anderson-Cottonwood Irrigation District
Cosumnes River Salmonid Barrier Program	188,255	Foundation of California
Boeger Family Farm Fish Screen, Phase III: Construction	139,500	Boeger Family Farms
Hastings Tract Fish Screen, Phase II: Construction	271,250	Hastings Island Land Company
City of Sacramento Fish Screen Replacement Project, Phase II	654,500	City of Sacramento
American Basin Fish Screen and Habitat Improvement Project	200,000	Natomas Mutual Water Company
<b>TOTAL PENDING AGREEMENT</b>	<b>\$4,112,305</b>	
Balance Remaining for the February 1999 Public Solicitation Package	1,799,695	
<b>Grand Total</b>	<b>5,912,000</b>	

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<sup>1</sup> Upon completion of the agreement negotiations, each project will be listed in the Quarterly Report with specific project description, completion data, and accomplishments.

California Bay-Delta Ecosystem Restoration Fund  
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B) Project Title: Stanislaus River Channel Restoration  
CALFED Recommended Level of Funding: \$1,038,000  
Total Funds Obligated Through December 31, 1998: \$1,038,000  
Total Funds Expended Through December 31, 1998: \$0

Funding Provided to: U.S. Fish and Wildlife Service

Project Description: The primary fishery objective of this project is to remove salmon predator habitat by filling a broad (10.65 acres), relatively shallow (3 to 10 foot deep) instream pond, thereby improving survival for out-migrating smolts. Additional project benefits include improved salmon spawning and rearing habitat, improved river dynamics, enhanced floodplain and riparian vegetation habitat. The salmon habitat improvements will be accomplished by reconfiguring spawning beds and floodplain to better conform with the existing river flow regime. This project was identified by the Integration Panel as a high priority project and selected by both the stakeholder groups and the Policy Group as a directed program.

Expected Project Completion Date: September 30, 2001

First Quarter Accomplishments:

Under this agreement Fish and Wildlife Service is part of a cost share with another agency and through another program. During the first quarter of FY 1999 the Anadromous Fish Restoration Program established cooperative agreements with the California Department of Water Resources to accomplish the Stanislaus River Channel Restoration project.

C) Project Title: Tuolumne River Setback Levees  
CALFED Recommended Level of Funding: \$655,000  
Total Funds Obligated Through December 31, 1998: \$655,000  
Total Funds Expended Through December 31, 1998: \$0

Funding Provided to: U.S. Fish and Wildlife Service

Project Description: This project is designed to restore and protect fall-run chinook salmon habitat on the Tuolumne River that was affected by flooding and sand and gravel mining operations within the floodplain by creating set back levees, floodplains, and riparian areas. It is designed to restore the Mining Reach to a more natural channel morphology. This project was identified by the Integration Panel as a high priority project and selected by both the stakeholder groups and the Policy Group as a directed program.

Expected Project Completion Date: September 30, 2001

First Quarter Accomplishments:

The U.S. Fish and Wildlife Service is working with the Turlock Irrigation District to develop the project.

D) **Project Title:** Fish Passage Project at Battle Creek

CALFED Recommended Level of Funding: \$395,000

Total Funds Obligated Through December 31, 1998: \$395,000

Total Funds Expended Through December 31, 1998: \$0

**Funding Provided to:** California Department of Water Resources (DWR)

**Project Description:** The funding is provided to DWR to conduct a reconnaissance investigation and preliminary design for winter-run, spring-run chinook, and Steelhead passage facilities as an important component of the Bay-Delta solution. The goal of the project is to have preliminary designs and environmental work substantially complete so the final design can be completed and the construction process can proceed in the phased restoration program being developed by the Battle Creek Working Group. This project was identified by the Integration Panel as a high priority project and selected by both the stakeholder groups and the Policy Group as a directed program.

**Expected Project Completion Date:** April 15, 2000

**First Quarter Accomplishments:**

The California Department of Water Resources initiated reconnaissance studies of the Battle Creek watershed. The U.S. Fish and Wildlife Service has provided their expertise in working with CALFED Program Staff to develop a phased approach to the Battle Creek project. Negotiations with the Fish and Wildlife Service, California Department of Fish and Game, and Pacific Gas & Electric continued.

2) **Project Title:** Anderson-Cottonwood Irrigation District (ACID) Fish Passage Project

CALFED Recommended Level of Funding: \$325,000

Total Funds Obligated Through December 31, 1998: \$325,000

Total Funds Expended Through December 31, 1998: \$325,000

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** ACID operates a diversion dam on the Sacramento River approximately 3.5 miles south of Keswick Dam. Problems of fish passage and migration of chinook salmon and steelhead have been documented for years. ACID proposes to correct these problems through construction of fish-friendly facilities. This proposal is for the first phase of work (completion of design documents, environmental documentation, and construction bid documents). Facilities will be constructed in a separate phase of work. Funding will be provided to ACID for accomplishment of this task.

**Expected Project Completion Date:** March 31, 1999

**First Quarter Accomplishments:** Held a workshop with the ACID Fish Passage Review Team and developed project instructions for the team to utilize in developing this project. Initiated structural analysis and other final design work on the proposed fish ladders. Submitted permit applications and coordination letters to the proper authorities. Conducted a public scoping meeting. Attended pre-application meeting with the U.S. Army Corps of Engineers. Continued progress on the Administrative Draft EA/IS.

**Habitat Restoration in Floodplains and Marshes:**

<b>CALFED Recommended Level of Funding:</b>	<b>\$35,542,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$32,842,000</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$3,608,634</b>

1) **Program Title:** Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program

CALFED Recommended Level of Funding:	\$16,700,000
Total Funds Obligated Through December 31, 1998:	\$14,000,000
Total Funds Expended Through December 31, 1998:	\$5,989

**Funding provided to:** U.S. Fish and Wildlife Service

**Program Description:** This program will focus on opportunities to expand floodways and riparian corridors, providing greater flood management flexibility and ecosystem benefits. It will use the priority species to identify and restore lands within the floodplains of the major rivers or their tributaries. An emphasis will be placed on lands flooded in January 1997. Conservation easements will be given a preference if they meet ecosystem restoration objectives. This program will also implement habitat restoration at existing sites already in conservation ownership. The U.S. Fish and Wildlife Service will work with the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, and the U.S. Bureau of Land Management. The following three items are included within the Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program (items A through C):

Project Selection Process: April 2, 1998

Final Project Selection: September 14, 1998

A) Status of the Proposal Solicitation Package of May 8, 1998 (PSP)

CALFED Recommended Level of Funding:	\$16,545,000
Total Funds Obligated Through December 31, 1998:	\$13,845,000
Total Funds Expended Through December 31, 1998:	\$5,989

Funding Provided to: U.S. Fish and Wildlife Service

Project Description: This program will focus on opportunities to expand floodways and riparian corridors, providing greater flood management flexibility and ecosystem benefits. It will use the priority species to identify and restore lands within the floodplains of the major rivers or their tributaries. An emphasis will be placed on lands flooded in January 1997. Conservation easements will be given a preference if they meet ecosystem restoration objectives. This program will also implement habitat restoration at existing sites already in conservation ownership. The U.S. Fish and Wildlife Service will work with the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, and the U.S. Bureau of Land Management.

Project Selection Process: April 2, 1998

Final Project Selection: September 14, 1998

First Quarter Accomplishments:

Began agreement negotiations with nineteen project proponents as follows<sup>2</sup> -

<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
Grayson River Ranch Perpetual Easement and Restoration	\$732,000	East Stanislaus Reclamation Conservation District and the Friends of the Tuolumne
Hill Slough West Habitat Demonstration Project	200,000	California Department of Fish and Game
Rhode Island Floodplain Management and Habitat Restoration	25,000	California Department of Fish and Game
Nelson Slough Wildlife Area Restoration Demonstration Project	256,476	California Department of Fish and Game
Merced River Salmon Habitat Enhancement, Phase III	2,433,759	California Department of Fish and Game
Stone Lakes National Wildlife Refuge Land Acquisitions	1,900,000	U.S. Fish and Wildlife Service
Petaluma Marsh Expansion Project - Marin County	352,135	Marin Audubon Society
South Napa River Wetlands Acquisition and Restoration Program	431,000	Napa County Land Trust

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<sup>2</sup> Upon completion of the agreement negotiations, each project will be listed in the Quarterly Report with specific project description, completion data, and accomplishments.

<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
Lower Clear Creek Floodway Restoration Project	3,559,596	Western Shasta Resource Conservation District
Fern-Headreach Tidal perennial Aquatic and Shaded Riverine Aquatic Habitat Conservation Project	425,000	Thomas Luckey (L&L Farms)
Benicia Waterfront Marsh Restoration	59,000	City of Benicia
Floodplain Acquisition, Management, and Monitoring on the Sacramento River	1,000,000	The Nature Conservancy
Cosumnes River Acquisition, Restoration, Planning, and Demonstration	750,000	The Nature Conservancy
Deer and Mill Creeks Acquisition and Enhancement	1,000,000	The Nature Conservancy
Lower San Joaquin River Floodplain Protection and Restoration Project	1,100,000	U.S. Fish and Wildlife Service
Biological Restoration and Monitoring in the Suisun Marsh/North San Francisco Bay Ecological Zone	772,667	California State University, Hayward
South Napa River Tidal Slough and Floodplain Restoration Project	1,455,000	City of American Canyon
Butte Creek Riparian Restoration Demonstration	76,348	California State University, Chico
Technical Review and Quality Control <sup>3</sup>	17,019	U.S. Fish and

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<sup>3</sup> A request for an additional \$862,000 from the Technical Review and Quality Control Program was made by the Policy Group in their December 4, 1998 letter. Approval this request was provided by the Secretary's office on January 6, 1999. Funding will be provided to the U.S. Fish and Wildlife Service to provide the necessary Technical Review of the projects selected through the Public Solicitation process.



<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
		Wildlife Service
<b>TOTAL PENDING AGREEMENT</b>	<b>\$16,545,000</b>	

CALFED agencies requested an additional \$2.7 million in funding on December 4, 1998<sup>4</sup>.

B) Project Title: Butte Creek Acquisition

CALFED Recommended Level of Funding: \$125,000

Total Funds Obligated Through December 31, 1998: \$125,000

Total Funds Expended Through December 31, 1998: \$0

Funding Provided to: U.S. Fish and Wildlife Service

Project Description: The Research Foundation of California State University, Chico, and the Butte Creek Watershed Conservancy are engaged in a long-range watershed management planning effort for Butte Creek in cooperation with landowners, water users, agricultural interests, conservation groups and state and federal agencies under the supervision of the Department of Geography and Planning at California State University, Chico. Protection of critical habitat for the endangered spring run Chinook salmon and steelhead trout populations of Butte Creek is a high-priority for all the agencies working on anadromous fisheries. This area would provide an opportunity to develop and demonstrate methods of channel and floodplain management that would help to stabilize the sediment and bedload input from the remains of the gravel mining operation. Development of a natural floodplain could have tremendous implications for riparian plant species that would help to cool the stream, filter urban runoff, capture large woody debris and increase the water storage and groundwater recharge capabilities of lower Butte Creek. Funding for this project has been provided through the State of California's Department of Water Resources, the State's Proposition 204, and the Federal Bay-Delta Account (total project cost is estimated to be \$869,000).

Expected Project Completion Date: August 2000

First Quarter Accomplishments:

With the property appraisal and reviews complete, the property has closed escrow and the papers were signed as of December 31, 1998.

C) Project Title: Lower Mill Creek Riparian Restoration

CALFED Recommended Level of Funding: \$30,000

Total Funds Obligated Through December 31, 1998: \$30,000

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<sup>4</sup> Approval of the December 4, 1998, request was provided by the Secretary's office on January 6, 1999.

Total Funds Expended Through December 31, 1998: \$0

Funding Provided to: U.S. Fish and Wildlife Service

Project Description: The proposed project will restore and enhance native riparian vegetation on one or more parcels along lower Mill Creek, a high-priority tributary of the upper Sacramento River. The project will focus on one or more identified gaps in

existing riparian habitat along lower Mill Creek and will contribute toward the long-range goal of restoring a continuous corridor of native riparian vegetation. The project has three primary objectives:

- 1) Helping to maintain and restore native shaded riverine aquatic habitat for native fisheries and other species.
- 2) Enhancing instream aquatic habitat by moderating water temperatures and reducing erosion, and monitoring effectiveness of planting and erosion control measures.
- 3) Engaging students and local landowners in restoration activities to demonstrate the feasibility and benefits of ecological restoration and to foster community support for restoration activities.

The Mill Creek Conservancy and The Nature Conservancy will coordinate project implementation with the landowner and with teachers and students from the Los Molinos High School and the Mill Creek Watershed Advisory committee. Specific tasks will include planting native shrubs and trees adjacent to existing vegetation to fill gaps in the riparian corridor, controlling invasive non-native plants, and monitoring plant survival and water temperature. Protection strategies including land acquisition or other binding agreements will be pursued with willing private landowners of the restoration site. Funding for this project has been provided through the State's Proposition 204, the Federal Bay-Delta Account, and other local districts (total project cost is estimated to be \$238,000).

Expected Project Completion Date: April 28, 2001

First Quarter Accomplishments:

The Nature Conservancy completed acquisition of the restoration site on December 28, 1998. Much work has been done towards completing the site plan. Site preparation will begin once the site plan is complete.

2) **Project Title:** San Joaquin Floodplain Acquisition and Riparian Restoration

CALFED Recommended Level of Funding:	\$10,647,000
Total Funds Obligated Through December 31, 1998:	\$10,647,000
Total Funds Expended Through December 31, 1998:	\$63,923

**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** Acquisition, preservation, and restoration of 6,169 acres of fish and wildlife habitat on the San Joaquin River floodplain for the San Joaquin River National Wildlife Refuge. Benefits to migratory birds and other bird species, splittail, and San Joaquin fall-run chinook. Provides some flood protection through widening of floodplain and transient storage of flood waters. The Fish and Wildlife Service is combining Bay-Delta funding with funds from other sources to cover the total cost of this project.

Expected Project Completion Date: December 31, 1998 *(to be extended to October 31, 1999 pending CALFED agreement.)*

**First Quarter Accomplishments:**

Vertebrate census data analysis has begun and species lists have been updated with the additional documented species. Since the Vierra property has recently been purchased, site clean-up will commence on this parcel and be completed during the next quarter.

3) **Project Title:** Cosumnes River Floodplain Acquisition

CALFED Recommended Level of Funding:	\$3,500,000
Total Funds Obligated Through December 31, 1998:	\$3,500,000
Total Funds Expended Through December 31, 1998:	\$3,500,000

**Funding provided to:** The Nature Conservancy (TNC)

**Project Description:** TNC and the Wildlife Conservation Board (WCB) are collaborating to acquire three properties (Whaley, Denier, and Park) from private willing sellers. The title of these properties will vest either with WCB, the State Lands Commission, or TNC and will remain part of the Cosumnes River Preserve. On June 15, 1998, the Policy Group forwarded a request for \$3.4 million to fund the purchase of Denier and Park properties. TNC was provided an additional \$100,000 in order to purchase 285 acres of the Whaley property with an escrow closing date of July 10, 1998. The properties will become part of the Cosumnes River Preserve, a 10-year-old, multi-partner effort that has successfully protected and restored riparian forest, seasonal wetland, and tidal habitats along the Cosumnes River. The project ranked among the highest priority project in the State's 1997 Request for Proposal. This project had originally been selected for funding through the State's Proposition 204 funds. However, the State was unable to provide the funds required by the close of escrow for the properties. The Policy Group, with concurrence from the BDAC and Ecosystem Roundtable, requested funding from the Federal Bay-Delta Account.

Expected Project Completion Date: December 31, 1998

**First Quarter Accomplishments:**

CALFED partially funded acquisition of the Park, Whaley and Denier properties. Acquisition of these properties substantially added to the Cosumnes River Preserve, a 10-year-old multi-partner effort that has successfully protected and restored riparian forest, seasonal wetland, and tidal habitat along the Cosumnes River. Acquisition is complete.

4) **Project Title:** Prospect Island Habitat Protection Project

CALFED Recommended Level of Funding:	\$2,000,000
Total Funds Obligated Through December 31, 1998:	\$2,000,000
Total Funds Expended Through December 31, 1998:	\$22,365

**Funding provided to:** U.S. Army Corps of Engineers

**Project Description:** The U.S. Army Corps of Engineers and the State of California, Department of Water Resources are co-sponsors of this project, which is designed to restore 1,200 acres of fresh-water tidal marsh and riparian habitat in the Delta. This project would provide habitat that may be beneficial as rearing habitat for fry and juvenile chinook salmon;

spawning and rearing habitat for resident Delta Fish, such as Delta Smelt and splittail; and habitat for waterfowl and shorebirds. The U.S. Fish and Wildlife Service plans to include the project in its proposed North Delta National Wildlife Refuge. The Prospect Island Protection Project will prevent further loss of the valuable riparian ecosystem on the island by repairing levees and returning the island to its pre-flood condition.

Expected Project Completion Date: September 30, 1999

**First Quarter Accomplishments:**

The first step in the habitat restoration project was to repair Miner Slough levee. The Corps completed those repairs and then began pumping floodwater off of the island while concurrently repairing the cross levee breach. Further repair of the cross levee and sandbagging will follow. By return of summer weather, the habitat contouring may commence through funding provided through the Army Corps of Engineers.

5) **Program Title:** Habitat Restoration/Flood Control Bypasses Program

CALFED Recommended Level of Funding:	\$1,200,000
Total Funds Obligated Through December 31, 1998:	\$1,200,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Army Corps of Engineers (COE)

**Project Description:** The current flood control bypasses along the Sacramento River provide seasonally flooded habitat, but also result in stranding of juvenile salmonids and other Delta fish. This program will evaluate restoration needs and opportunities to improve habitat, reduce stranding, and to improve connectivity with the Sacramento River and the North Delta.

Elements to be evaluated would include: a) improve existing habitats; b) improve streamflows; c) improve wetland, riparian, slough, agricultural, and shaded riverine aquatic habitats; d) eliminate fish barriers; e) reduce fish entrainment and stranding; and f) develop wildlife and fisheries friendly levee maintenance programs. The proposed actions will be developed to avoid conflicts with existing and future flood control needs. The U.S. Army Corps of Engineers will work with CALFED Staff to develop this program in accordance with Ecosystem Roundtable and Policy Group requirements.

Expected Project Completion Date: Still developing the program with CALFED staff.

**First Quarter Accomplishments:**

Currently working on resource plan to initiate project schedule and budget. Coordinating solicitation process with CALFED Program Staff. Development of scope of work and criteria is continuing. Projects will be solicited through the February 1999 CALFED Public Solicitation Package.

6) **Project Title:** Napa River Wetlands Acquisition

CALFED Recommended Level of Funding:	\$1,000,000
Total Funds Obligated Through December 31, 1998:	\$1,000,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This project will allow acquisition of approximately 68 acres of diked, historic wetlands along the Napa River. The land will be restored to estuarine, riparian, and aquatic habitats through a combination of floodplains and marshplains. This project targets the primary objectives of the CALFED program by acquiring lands which were historically part of the San Francisco Bay Area wetland system and which directly influence the survival of several endangered species. These lands are at high risk of conversion to vineyard and/or urbanization. This project is a phased approach to land acquisition and restoration. Once acquired by the Napa County Land Trust, the title to these properties will be simultaneously conveyed to the California Department of Fish and Game, along with the responsibility for maintenance thereof. Restoration activities will be undertaken by the California Department of Fish and Game and the U.S. Army Corps of Engineers.

Expected Project Completion Date: September 30, 2000

**First Quarter Accomplishments:**

The Napa County Land Trust is negotiating purchases along the Napa River as described in their proposal. Progress has been slow but negotiations are continuing amicably.

7) **Project Title:** Bear Creek Floodplain Restoration Demonstration Project

CALFED Recommended Level of Funding:	\$334,000
Total Funds Obligated Through December 31, 1998:	\$334,000
Total Funds Expended Through December 31, 1998:	\$16,357

**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** Feasibility analysis for restoring floodplain function along the San Joaquin River and Bear Creek on public lands to provide flood protection benefits, enhance shaded riverine aquatic habitat and wetlands, and improve instream habitat for the San Luis National Wildlife Refuge Complex. Benefits to migratory birds, San Joaquin fall run chinook salmon, and several other fish species are expected.

Expected Project Completion Date: March 31, 1999

**First Quarter Accomplishments:**

Contractor has reviewed biological data obtained from San Luis National Wildlife Refuge and Grant Valley State Park files. Biological resources have been summarized in a tabular format. The U.S. Army Corps of Engineers(COE) data from the San Joaquin River comprehensive study has been obtained to improve accuracy and reliability of hydrologic analysis. Fish and Wildlife Service conducted survey work and obtained survey data from other agencies needed to complete the project basemap. Contract modification funded additional underwater survey work on the Salt Slough. Preparations for development of project hydrology to run the UNET model have been made.

8) **Project Title:** Cache Slough Habitat Enhancement

CALFED Recommended Level of Funding:	\$85,000
Total Funds Obligated Through December 31, 1998:	\$85,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Reclamation District 2060 proposes restoration of approximately 2,000 linear feet of levee bank where erosion has destroyed shaded riverine aquatic habitat and created erosion pockets. Instead of utilizing traditional erosion repair (i.e., fill and riprap), the Reclamation District 2060 plans to stabilize the bank and encourage habitat which will benefit target priority species including the Delta smelt. The U.S. Bureau of Reclamation will work with Reclamation District 2060 in accomplishing this project.

Expected Project Completion Date: May 31, 1999

**First Quarter Accomplishments:**

The U.S. Army Corps of Engineers is reviewing the erosion sites. When the Corps approval is complete, progress on the project will continue.

9) **Project Title:** Regional Wetlands Goals Project

CALFED Recommended Level of Funding:	\$76,000
Total Funds Obligated Through December 31, 1998:	\$76,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Environmental Protection Agency (EPA)

**Project Description:** This project is a multi-agency, interdisciplinary planning effort whose main objective is to identify the kinds, amounts, and distribution of wetlands and related habitats needed to sustain diverse and healthy communities of fish and wildlife in the San Francisco Bay area. The habitat restoration goals for this project will provide the biological basis for regional wetlands management and will provide specific information required by the CALFED planning process to meet restoration goals throughout the San Francisco Bay. EPA is working with the San Francisco Estuary Institute to accomplish the goals of this project.

Expected Project Completion Date: September 30, 2002

**First Quarter Accomplishments:**

The Environmental Protection Agency and the San Francisco Estuary Institute are working with CALFED Program Staff in developing the program for issuance in a public solicitation package later in FY 1999.

**River Channel Changes:**

CALFED Recommended Level of Funding:	\$9,624,010
Total Funds Obligated Through December 31, 1998:	\$9,624,010
Total Funds Expended Through December 31, 1998:	\$242,800

1) **Project Title:** Liberty Island Acquisition

CALFED Recommended Level of Funding:	\$8,577,000
Total Funds Obligated Through December 31, 1998:	\$8,577,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** Acquisition of Liberty Island (4,760 acres) for future restoration of native Delta habitats and species. Strategic location in north Delta at southern end of Yolo Bypass provides potential wetlands, shaded riverine aquatic habitat, instream habitat for winter run, Delta smelt, splittail, and other species. Funding will cover full acquisition cost. Restoration funding not identified.

Expected Project Completion Date: February 1999 (*to be extended to October 31, 1999 pending CALFED agreement.*)

**First Quarter Accomplishments:**

The Fish and Wildlife Service agreed to purchase this property on July 20, 1998. The agreement is contingent upon completion of the NEPA process which Fish and Wildlife Service is preparing. Fish and Wildlife Service is still on target for a project completion of October 31, 1999.

- 2) **Project Title:** Sedimentation Movement and, Availability and Monitoring in the Delta
- |  |             |
|--|-------------|
| CALFED Recommended Level of Funding:             | \$1,047,010 |
| Total Funds Obligated Through December 31, 1998: | \$1,047,010 |
| Total Funds Expended Through December 31, 1998:  | \$242,800   |

**Funding provided to:** U.S. Geological Survey

**Project Description:** The objective of this study involves the analysis of sediment movement in the Delta, both suspended load, and bedload. This analysis is necessary in order to determine the availability, quantity, and movement of sediment through the Delta. This study will assist water managers in the evaluation of levee projects, ecosystem restoration efforts, and water quality impacts from contaminated sediment. The project includes the installation of monitoring equipment, collection of data, and development of a final report.

Expected Project Completion Date: September 30, 2000

**First Quarter Accomplishments:**

Continued cleaning of suspended-solids sensors and water sample collection at the Bay and Delta study sites (approximately every 3-4 weeks). On November 4th, U.S. Geological Survey and the U.S. Army Corps of Engineers personnel met with the San Francisco Estuary Institute to discuss the project and the Regional Monitoring Program. The first wet season pulses from the Central Valley watershed occurred during the quarter. Initial review of the data indicates that two sediment pulses passed the Freeport, CA area during higher flows in late November and early December. Sedimentation monitoring continues.

In addition to the above activities, U.S. Geological Survey personnel began working on modifying the methods description for suspended load measurements related to the Delta Sedimentation Project.



**Improved Instream Flows:**

<b>CALFED Recommended Level of Funding:</b>	<b>\$14,500,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$14,450,000</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$0</b>

1) **Program Title:** Environmental Water Acquisition Program

CALFED Recommended level of funding:	\$14,450,000
Funds obligated through December 31, 1998:	\$14,450,000
Funds expended through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Environmental Water Acquisition Program will be guided by policy principles being developed by the stakeholders through the Ecosystem Roundtable. These principles will focus on fostering local partnerships, ensuring adequate evaluation, avoidance and mitigation of any potential local economic effects, and developing activities which provide the greatest ecosystem benefit relative to cost. The Ecosystem Roundtable is currently in the process of developing these principles. The program will focus on activities to improve instream flows to benefit the priority species in cooperation with the existing Environmental Water Acquisition Program operating under the Central Valley Project Improvement Act. Activities under this program can include multi-year water transfers or acquisitions, funding for water use efficiency measures to allow increases instream flows, and funding for foregone power revenues in exchange for increased bypass flows. The U.S. Bureau of Reclamation will coordinate this program with CALFED program staff to accomplish the goals of this program.

**First Quarter Accomplishments:**

Reclamation and the National Fish and Wildlife Foundation are working with CALFED Program Staff and the Ecosystem Roundtable in further definition of this program. No water was acquired with these funds during this quarter.

2) **Project Title:** Environmental Water Acquisition Study

CALFED Recommended Level of Funding:	\$50,000
Total Funds Obligated Through December 31, 1998:	\$0
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** To improve coordination between CALFED and CVPIA water acquisition programs, CALFED will conduct a review of the Water Acquisition Program being implemented under the mandate of Section 3406(b)(3) of the Central Valley Project Improvement Act. The objective of this study is to determine what is needed to develop and implement an effective, coordinated, long-term water acquisition program in a timely fashion. Reclamation proposes hiring a contractor to prepare an assessment of the CVPIA Water Acquisition program. The contractor will interview the CVPIA Water Acquisition Program manager as well as other managers of similar water purchase/transfer programs (similar

programs include: the State Drought Water Bank, the State Water Project Supplemental Water Purchase Program, and the Yakima River Basin Water Enhancement Program). After they've analyzed the data collected, the contractor will prepare a comprehensive report detailing their findings.

**First Quarter Accomplishments:**

Reclamation is working with the stakeholder community in the development of this study. Pending concurrence of discussions regarding the focus of the Environmental Water Acquisition Account, this study will proceed.

**Water Quality and Temperature Improvement:**

<b>CALFED Recommended Level of Funding:</b>	<b>\$5,003,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$5,003,000</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$691,560</b>

- 1) **Project Title:** Evaluation of Selenium Sources, Levels, and Consequences in the Delta
 

CALFED Recommended Level of Funding:	\$1,589,000
Total Funds Obligated Through December 31, 1998:	\$1,589,000
Total Funds Expended Through December 31, 1998:	\$225,420

**Funding provided to:** U.S. Geological Survey

**Project Description:** This 3-year study will provide a quantitative description of the different sources of selenium concentrations in the Bay-Delta, a determination of how changes in sources may affect selenium tissue concentrations in primary consumers, a linkage of selenium concentrations in primary consumers to uptake by predators, a direct determination of whether selenium affects reproduction and development in sturgeon, models which can forecast outcomes of alternative selenium remediation/restoration strategies, and a baseline of monitoring data.

Expected Project Completion Date: June 30, 2001

**First Quarter Accomplishments:**

Comparison of speciation among the Bay-Delta and the San Joaquin River continued during the quarter focusing on low inflow data accumulated in October 1998. Analysis of the data is in progress. Monthly water sampling continues at Vernalis and Freeport beginning in November 1998. Continued work on conceptual models of source, speciation, transport, fate and effect.

- 2) **Project Title:** Assessment of Organic Matter in the Habitat and Its Relationship to the Food Chain

CALFED Recommended Level of Funding:	\$1,400,000
Total Funds Obligated Through December 31, 1998:	\$1,400,000
Total Funds Expended Through December 31, 1998:	\$381,573

**Funding provided to:** U.S. Geological Survey

**Project Description:** Research proposal for a comprehensive assessment of the production, import, utilization, and export of the organic matter that serves as food resource for fish in their early life stages. Lower tropic level ecosystem functions potentially limit fish population growth in the Delta. Benefits to multiple fish species. First year of funding was recommended (total estimated project cost is \$1,400,000 for a 3-year project).

Expected Project Completion Date: April 30, 1999

**First Quarter Accomplishments:**

The first sampling for this project was conducted from October 12-15, 1998. USGS collected water, seston, zooplankton, and sediment samples from 10 sites across the Delta, representing the full spectrum of habitat types. The results confirm a basic hypothesis of the study: there are large spatial variations in the quantity and quality of the organic matter across the gradient of habitat types within the Delta.

3) **Project Title:** Bacterial Treatment of Selenium in the Panoche Drainage

CALFED Recommended Level of Funding:	\$1,149,000
Total Funds Obligated Through December 31, 1998:	\$1,149,000
Total Funds Expended Through December 31, 1998:	\$66,973

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Algal-Bacterial Selenium Removal Facility has been operating for a year in the Panoche Drainage District near Firebaugh. The facility consists of two identical systems in which algae are grown, harvested, and then used as a bacterial substrate for selenium reduction from subsurface agricultural drainage water. Funding of this project will allow the continued operation of the facility for 3 years. Panoche Drainage District and Enrico Farms, Inc., are hosting the facility. Funding will be provided to the University of California, Berkeley (Lawrence Berkeley Laboratory) for accomplishment of this task.

Expected Project Completion Date: September 30, 2001

**First Quarter Accomplishments:**

In October installation of a floating surface cover on the North Reduction Pond was completed. Larger diameter piping was installed for one hydraulic transfer. The original piping had lost capacity due to excessive scaling. The flow treated by the Mode 2 Algal-Bacterial Selenium Removal (ASBR) System was gradually increased 170% from 4,600 to 7,900 gallons per day during September through November. The Mode 1 ASBR System flow has been maintained at 4,600 gallons a day. Weekly samples of the influent and effluent of each pond of the ASBR Systems have been collected and analyzed. Began testing and adapting to the ASBR samples, standard methodologies for determination of unfiltered total selenium. Invertebrate sampling was conducted for the purpose of genus identification and selenium analysis.

4) **Project Title:** Sand and Salt Creek Watershed Project

CALFED Recommended Level of Funding:	\$599,000
Total Funds Obligated Through December 31, 1998:	\$599,000
Total Funds Expended Through December 31, 1998:	\$17,594

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This watershed management project is designed to assist private landowners in addressing non-point source pollution associated with grazing, almond orchards, and irrigated cropland. Management practices designed to reduce surface runoff containing pesticide residues and sediments will be implemented at twenty selected sites. In addition, grade stabilization structures will be constructed within the watershed. The U.S. Bureau of Reclamation will coordinate this project with the Colusa County Resource Conservation District and the Natural Resources Conservation Service.

Expected Project Completion Date: December 31, 1999

**First Quarter Accomplishments:**

Held an introductory Public Meeting and Steering Committee Meeting, prepared responsiveness summary, and developed a rating system.

5) **Project Title:** Integrated Pest Management in Suisun Bay Program

CALFED Recommended Level of Funding:	\$266,000
Total Funds Obligated Through December 31, 1998:	\$266,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The program builds on an existing pilot project to educate the public and change their behavior regarding urban pesticide use to move towards integrated pest management. This program uses targeted public information and educational programs developed in the pilot project. This program is designed to reduce runoff of pesticides from this urban area into the Delta near Suisun Bay and will include monitoring and evaluation of effectiveness. The U.S. Bureau of Reclamation will work with the Central Contra Costa Sanitary District to develop this program.

Expected Project Completion Date: August 31, 2001

**First Quarter Accomplishments:**

Drafted a Project Evaluation and Monitoring Plan and Quality Assurance Project Plan and submitted to the Bureau of Reclamation for review and approval. Issued a request for proposals for training consultants to train store employees in person and to develop a video as a supplemental training tool. Recruited 13 stores within central Contra Costa County to participate in the Integrated Pest Management Partnership Project and identified two additional stores to recruit. Drafted five new project fact sheets on the following topics: cockroaches, spiders, the proper use and disposal of pesticides, lawn care, and Managing Pests Naturally with a Healthy Garden.

**Introduced and Undesirable Species Control:**

CALFED Recommended Level of Funding:	\$1,250,000
Total Funds Obligated Through December 31, 1998:	\$1,250,000
Total Funds Expended Through December 31, 1998:	\$0

1) **Program Title:** Exotic Species Control Program

CALFED Recommended Level of Funding:	\$1,250,000
Total Funds Obligated Through December 31, 1998:	\$1,250,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** This program will identify and implement measures to prevent additional introduction of exotic, non-native aquatic species developing an overall strategy which seeks to control various sources of introductions such as ballast water and intentional introductions. The program may also identify specific needs to control previously introduced species if experts can identify effective remedial control measures. The U.S. Fish and Wildlife Service will work with CALFED staff to develop this program.

Expected Project Completion Date: September 30, 2000

**First Quarter Accomplishments:**

In February 1999, CALFED will issue a Proposal Solicitation Package requesting proposals to support prevention-oriented management and research projects to prevent or minimize additional invasive species from being introduced, and also, projects that are control-oriented management and research in nature to eradicate or manage invasive species once they have arrived. FWS is working with CALFED Program Staff to develop the program.

**Improved Fish Management and Hatchery Operations:**

CALFED Recommended Level of Funding:	\$625,000
Total Funds Obligated Through December 31, 1998:	\$625,000
Total Funds Expended Through December 31, 1998:	\$0

1) **Project Title:** Evaluation of Tagging Data

CALFED Recommended Level of Funding:	\$625,000
Total Funds Obligated Through December 31, 1998:	\$625,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** This project consists of two integrated components. The first component will evaluate existing coded wire tag and recovery data from the Central Valley, look at hatchery produced salmon contribution toward commercial and recreational harvest, and develop parameters associated with constant fractional or mass marking programs for fish harvest. The second component will demonstrate the feasibility of marking large numbers of fish for release into Central Valley waters. Increasing the tagging levels will provide a much greater definition of juvenile salmon inland distribution, migration rates, growth rates, and origin of fish captured. The U.S. Bureau of Reclamation will work with Northwest Marine Technology, Inc. and the California Department of Fish and Game to accomplish the project goals.

Expected Project Completion Date: December 31, 2000

### **First Quarter Accomplishments:**

A meeting was held with representatives of the Washington Department of Fish and Wildlife to discuss their view with respect to selective fisheries and to develop a list of factors that might need to be considered in development of the report. Contract language was finalized with the University of Idaho for the participation of Dr. Ken Newman in the project. Bailey Environmental has obtained all coded wire tag release information from the California Department of Fish and Game and has some of the juvenile recovery information as well. All adult recovery information is currently in hand and is undergoing QA/QC with the PSMFC Regional Mark Information center data and is being consolidated into a single database. In addition, Bailey Environmental is continuing to obtain data on juvenile recoveries from the U.S. Fish and Wildlife Service.

Engineering design and testing continues on the prototype Marking and Tagging System (MATS). Progress is steady but slow, toward a version that will go into production. The prototype MATS machine was demonstrated to the State of Oregon in December at the Oregon Department of Fish and Wildlife Regional Office.

### **Watershed Management:**

<b>CALFED Recommended Level of Funding:</b>	<b>\$2,798,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$2,253,000</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$60,816</b>

#### **1) Program Title:** Watershed Restoration Planning and Implementation Program

Status of the Proposal Solicitation Package of May 8, 1998 (PSP)

CALFED Recommended Level of Funding:	\$2,095,000
Total Funds Obligated Through December 31, 1998:	\$1,550,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Environmental Protection Agency

**Project Description:** A program to promote locally-led efforts to develop comprehensive restoration plans for key tributaries of the Central Valley and Bay-Delta Watershed. This program will fund the development and implementation of restoration projects or plans by new or existing watershed groups. To promote watershed stewardship throughout the ecosystem and to support an increased understanding of the linkages with the upper watershed, geographic scope of the watershed program will include the upper watershed and the local watersheds below the Delta. Efforts under this program will be coordinated through the CALFED Watershed Management Program. The following table of projects are included within the Watershed Restoration Planning and Implementation Program.

Expected Project Completion Date: September 30, 2002

**First Quarter Accomplishments:**

Began agreement negotiations with fourteen project proponents as follows<sup>5</sup> -

<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
Petaluma River Watershed Restoration Program	\$162,000	Southern Sonoma County Resource Conservation District
Cottonwood Creek Watershed Group Formation	119,000	Cottonwood Creek Watershed Group
Battle Creek Watershed Stewardship	107,000	Battle Creek Watershed Conservancy
Local Watershed Stewardship: Steelhead Trout Plan	38,000	Friends of Corte Madera Creek Watershed
Cold Water Fisheries and Water Quality Element	147,000	City of San Jose Services Department
Merced River Corridor Restoration Plan	220,000	Stillwater Sciences & Merced County Planning & Community Development Department
South Yuba River Coordinated Watershed Management Plan	193,000	California Department of Parks and Recreation
Watershed Restoration Strategy for the Yolo Bypass	180,000	Yolo Basin Foundation, Inc.

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<sup>5</sup> Upon completion of the agreement negotiations, each project will be listed in the Quarterly Report with specific project description, completion data, and accomplishments.

<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
Proposal to Develop Local Watershed Stewardship Plan for the Lower Mokelumne River	118,000	San Joaquin County Resource Conservation District
Union School Slough Watershed Improvement Program	449,000	National Audubon Society, California Chapter
American River Integrated Watershed Stewardship Strategy	162,000	Placer County Resource Conservation District
Sulphur Creek Coordinated Resource Management Planning Group	20,000	Sacramento Watersheds Action Group
Lower Putah Creek Watershed Stewardship Program	76,000	Solano County Department of Environmental Management
Alhambra Creek Watershed CRMP Program	104,000	Contra Costa Resource Conservation District
<b>TOTAL PENDING AGREEMENT<sup>6</sup></b>	<b>\$2,095,000</b>	

- 2) **Project Title:** Improvement/Sediment Stabilization on Deer, Mill and Antelope Creeks (Lassen National Forest) **CALFED Recommended Level of Funding:**  
\$371,000  
Total Funds Obligated Through December 31, 1998: \$371,000

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<sup>6</sup> A request for \$545,000 from the Technical Review/Quality Control Program and \$400,000 from FY >99 was made by the Policy Group on December 4, 1998. Approval of the request was provided by the Secretary's office on January 6, 1999.



California Bay-Delta Ecosystem Restoration Fund  
FY1999 First Quarter Report (October 1998 through December 1998)

Total Funds Expended Through December 31, 1998:	\$50,342
<b>Funding provided to:</b> U.S. Forest Service	

**Project Description:** Program to reduce generation of fine sediment from upland, riparian, and road-related sources in three watersheds utilized by spring run salmon and steelhead in Lassen National Forest (LNF). Stabilization measures would be implemented in known problem areas, and inventory, design, and planning measures pursued for remaining road-related problems. Includes identification of willing sellers for potential land exchange related to acquisition of riparian areas.

Expected Project Completion Date: December 31, 2000

**First Quarter Accomplishments:**

Task 1 is the implementation of erosion control measures at known sites. USFS is in the design phase of the site survey. The NEPA process and ESA consultation has delivered a completed Decision Memo, the specialists supporting documents are complete, public scoping is complete with supportive comments from all, consultation with the State Historic Preservation Office is ongoing, and USFS is continuing consultations with the National Marine Fisheries Service for all sites. Contract preparation is expected to be complete by the Spring of 1999. One half mile of road obliteration is completed in the Antelope Creek watershed (coordinated with the CALFED engineer to ensure compliance with CALFED restoration objectives). Work has started on Best Management Practices (BMP) concurrent monitoring and USFS expects to complete the process immediately following implementation. Long term BMP monitoring elements have been developed for each of the restoration sites. Non-routine Biological Assessment tiering forms containing monitoring elements have been completed.

The watershed restoration planning component of the project had the CALFED engineer completing field identification of over 250 potential restoration sites in the Deer, Mill, and Antelope Creek watersheds. Descriptions of each site have been completed, and a GIS layer of the sites has been developed. Work continues on building oracle database to interface with site GIS layer. USFS conducted three meetings with Collins Pine Corporation on joint restoration projects, specifically a low water crossing removal on Deer Creek, and the obliteration of two road segments, one along Deer Creek, and one along Alder Creek, a tributary to Deer Creek. Coordinating a joint restoration proposal with the Butte Creek Conservancy to restore riparian function to Colby Meadows.

3) **Project Title:** Butte Creek Watershed Restoration Implementation

CALFED Recommended Level of Funding:	\$294,000
Total Funds Obligated Through December 31, 1998:	\$294,000
Total Funds Expended Through December 31, 1998:	\$10,474

**Funding provided to:** U.S. Fish and Wildlife Service

**Project Description:** Watershed planning, outreach, and restoration project to be implemented by the Butte Creek Watershed Conservancy. This project will include watershed planning, an education program, an evaluation of the geomorphology of an important segment of Butte Creek, and a road survey in the watershed to identify future erosion control needs. The U.S. Fish and Wildlife Service is working with California State University, Chico and the

Butte Creek Watershed Conservancy to develop this program.

Expected Project Completion Date: September 30, 1999

**First Quarter Accomplishments:**

A fully executed agreement for the Butte Creek Watershed Coordinator Assistant is nearing completion of negotiations. Cooperative agreements for the education project, road survey, and geomorphology analysis are being negotiated with California State University, Chico.

4) **Project Title:** Inventory of Forest Road Systems at Cat Creek Watershed

CALFED Recommended Level of Funding:	\$38,000
Total Funds Obligated Through December 31, 1998:	\$38,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Forest Service

**Project Description:** An interdisciplinary team will develop a process for reviewing the forest road system within the Cat Creek watershed. The objective is to provide decision makers with recommendations about which roads to repair, relocate, gate, or obliterate. The process developed by this team would be used to review the entire forest road system within the Cosumnes River Basin. Roads are the principle cause of accelerated erosion in forests in the western United States; this project will ultimately improve riparian resources and aquatic habitat by removing sources of sedimentation.

Expected Project Completion Date: September 30, 1999

**First Quarter Accomplishments:**

As reflected in the Fourth Quarter Report of FY 1998, USFS has postponed further progress on this project pending completion of the GIS road layer project is complete. USFS still anticipates no extension of the completion date.

**Monitoring, Permit Coordination, and Other Special Support Programs:**

CALFED Recommended Level of Funding:	\$6,930,000
Total Funds Obligated Through December 31, 1998:	\$3,043,255
Total Funds Expended Through December 31, 1998:	\$1,234,792

1) **Project Title:** Integrated Phasing Strategy

CALFED Recommended Level of Funding:	\$4,847,000
Total Funds Obligated Through December 31, 1998:	\$1,720,595
Total Funds Expended Through December 31, 1998:	\$955,610

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** In order to restore the Bay-Delta ecosystem using adaptive management, a logical set of priorities must be established based on the current understanding of the system. Actions need to be selected to address these priorities and the results of these actions need to be evaluated to refine priorities in future years. The Ecosystem Restoration Program Plan (ERPP) is the "common element" to all alternatives being considered in the Programmatic EIS. A strategy for phased implementation of the ERPP needs to be developed to lay out these priorities and identify the near-term restoration actions to address them. The

strategy for phased implementation of ecosystem restoration activities is described in the ERPP, essential to the conservation strategy being developed to comply with the Endangered Species Act, and the basis for setting funding priorities for near-term restoration in the guidance document. The phased implementation strategy will require technical input on three levels including:

- a) additional technical assistance at the staff level;
- b) establishment of a standing science panel composed of independent scientists and local stakeholder, agency, and independent specialists; and
- c) a panel of scientists (without local stakeholder, agency, or other independent specialists).

**First Quarter Accomplishments:**

CALFED program staff has completed the Strategic Plan for the Ecosystem Restoration Program. The interagency conservation strategy team is continuing to develop an ecosystem/habitat based biological assessment for the Federal Endangered Species Act, Section 7 requirements and a programmatic Natural Community Conservation Program (NCCP) plan for California's NCCP Act, Section 2835 requirements.

2) **Program Title:** Comprehensive, Monitoring, Assessment, and Research Program<sup>7</sup> (CMARP)

CALFED Recommended Level of Funding:	\$1,157,000
Total Funds Obligated Through December 31, 1998:	\$1,110,700
Total Funds Expended Through December 31, 1998:	\$215,760

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Interagency Ecological Program (IEP) and the San Francisco Estuary Institute will work with the CALFED program staff and stakeholders to develop CMARP for the Bay-Delta and its watershed. CMARP will include a structure and process for integrated data management, data analysis, and reporting. Monitoring elements for near-term ecosystem restoration need to be integrated with CMARP so that restoration proposals contain monitoring elements to determine whether stated objectives have been met and to provide guidance for assessing future restoration needs. This special support program will fund a portion of a system which does the following: reviews monitoring, assessment, and reporting plans prior to implementation; standardizes data collection methodology, format, and storage; and reviews, evaluates, and circulates results

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<sup>7</sup> This program was formally titled the Comprehensive and Coordinated, Monitoring, Assessment, and Research Program (CCMARP).

to all interested parties. In our January 16, 1998, request, funding was approved to develop the basic framework which is now in draft form. This funding will be used to begin implementation of CMARP once the framework is complete. CMARP will incorporate data from the IEP, the Central Valley Project, the Comprehensive Assessment Monitoring Program (CAMP), and data provided by the San Francisco Estuary Institute. CMARP will include a structure and process for integrated data management, data analysis, and reporting. Monitoring elements for near-term ecosystem restoration need to be integrated with CMARP so that restoration proposals contain monitoring elements to determine whether stated objectives have been met and to provide guidance for assessing future restoration needs. Funding recipients include the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, and CALFED program staff.

**First Quarter Accomplishments:**

A conceptual mode workshop was convened to explore the basis for developing and subsequently utilizing conceptual models for resource management. A preliminary draft report entitled "Recommendations for the Implementation and Continued Refinement of a Comprehensive Monitoring, Assessment and Research Program" has been completed and distributed. Based on comments received a final draft is in preparation and will be available for public distribution by the middle of January 1999. After a public review period, a final report will be developed and distributed to the CALFED Policy Group for their acceptance.

3) **Program Title:** Bay-Delta Education Program

Status of the Proposal Solicitation Package of May 8, 1998 (PSP)

CALFED Recommended Level of Funding:	\$460,000
Total Funds Obligated Through December 31, 1998:	\$386
Total Funds Expended Through December 31, 1998:	\$386

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Building public understanding of efforts to restore the Bay-Delta ecosystem is critical to the success of these efforts. Many of the concepts in habitat restoration are new and innovative and there is the need to increase public understanding to increase acceptance and facilitate implementation. This program will provide support for educational programs such as Adopt-a-Watershed. The U.S. Bureau of Reclamation will most likely work with the National Fish and Wildlife Foundation to develop the most effective program. The following table of projects are included within the Bay-Delta Education Program.

**First Quarter Accomplishments:**

Began agreement negotiations with eleven project proponents as follows -

Project	Recommended Funding Level	Funding Recipient (Project proponent)

<b>Project</b>	<b>Recommended Funding Level</b>	<b>Funding Recipient (Project proponent)</b>
San Joaquin Valley ' s "Salmonids in the Classroom" Program Enhancement	\$3,000	California Department of Fish and Game
Traveling Film Festival/Heron Booth/Video Archive	54,000	Independent Documentary Group
Environmental Agriculture Conferences and Field Tours	28,000	Committee for Sustainable Agriculture
Sacramento River Headwaters to the Ocean, Public Information and Education	49,640	Sacramento River Discovery Center
Discover the Flyway	49,000	Yolo Basin Foundation
The Butte Creek Watershed Educational Workshops and Field Tours Series	33,000	California State University, Chico
Bay-Delta Environmental Restoration Education Program	40,000	Water Education Foundation
The Virtual Science Center and Hands-on Learning Programs	42,000	The Delta Science Center at Big Break
Water Hyacinth Education Program	9,600	Sacramento Regional County Sanitation District
Water Challenge 2010	64,500	U.S. Army Corps of Engineers
Tuolumne River Natural Resources Program	44,700	City of Modesto
Technical Review and Quality Control	42,560	U.S. Forest Service
<b>TOTAL PENDING AGREEMENT</b>	<b>\$460,000</b>	

CALFED agencies requested an additional \$160,000 in funding on December 4, 1998<sup>8</sup>

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<sup>8</sup> Approval of the December 4, 1998, request was provided by the Secretary ' s office on January 6, 1999.

(including a request by Reclamation for \$40,000 in funding to cover program administration by the USFS) .

4) **Project Title:** Coordinated Permitting

CALFED Recommended Level of Funding:	\$282,000
Total Funds Obligated Through December 31, 1998:	\$100,000
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Facilitation of timely review and necessary action on permits will be required for implementation of near-term ecosystem restoration projects. This effort will also lay the groundwork for a coordinated approach on permit coordination for the eventual implementation of the CALFED Bay-Delta Program (CALFED Program).

**First Quarter Accomplishments:**

Provided assistance to recipients regarding permit and environmental documentation requirements and lead agency designation. Preparation is continuing on a Draft biological assessment to assist in the initiation of a programmatic consultation for early ecosystem restoration activities obtaining U.S. Army Corps of Engineers 404/401 permits. Completion of the draft biological assessment is scheduled for February 1999.

5) **Program Title:** Development of a Watershed Management Program

CALFED Recommended Level of Funding:	\$184,000
Total Funds Obligated Through December 31, 1998:	\$111,574
Total Funds Expended Through December 31, 1998:	\$63,036

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Successful and durable solutions to complex water quality problems which affect environmental resources are best approached from the perspective of an entire watershed. Through this approach, local pollution prevention and control activities are coordinated with similar activities to enable a concerted effort to alleviate ecosystem and water quality problems. Coordination of these efforts also results in the exchange of information, sharing of experiences, and development of more efficient solutions. Reclamation is working with CALFED Program Staff and will provide funding per CALFED Program Staff 's direction.

**First Quarter Accomplishments:**

The Watershed Program, working with Bay-Delta Advisory Council 's (BDAC) Watershed Work Group (WWG) and the Interagency Watershed Advisory Team (IWAT) has completed a revised version of the Watershed Program Plan. The program plan contains refined program goals and objectives, lays out a set of driving program principles, describes five primary program elements, and identifies 11 key implementation actions. The five primary program elements and the 11 key implementation actions are as follows:

Five Primary Program Elements

- Facilitate and improve coordination and assistance among government agencies, other organizations, and local watershed groups
- Adaptive management and monitoring
- Education and community outreach
- Integration with other CALFED programs



- Defining and describing watershed processes and relationships

#### Eleven Program Actions

- Fund and implement watershed restoration maintenance, conservation and monitoring activities
- Identify priority locations and implement watershed restoration efforts
- Assist local watershed groups and government agencies to address common issues, to ensure effective communication and implementation among government agencies and stakeholders
- Develop and implement a funding process to build community capacity and insure participation of local landowners
- Improve the use and usefulness of existing and future watershed clearinghouse functions
- Ensure the completion of project level environmental documentation and permitting
- Evaluate the benefits that accrue from watershed management activities designed to achieve CALFED goals and objectives
- Establish, fund and maintain watershed restoration, and maintenance assistance to aid local watershed groups and private landowners with project concept, design, and implementation
- Coordinate with other CALFED and Non-CALFED programs on watershed related activities.
- Work with stakeholders to develop state-wide umbrella watershed legislation
- With the consent of owners perform reoperation analysis for small hydro facilities to benefit local and downstream water users, water quality and the environment

The revised draft also outlines an implementation strategy. This work was accomplished in part by hosting four IWAT meetings and by providing staff support to three watershed workgroup meetings. The Program also worked closely with Comprehensive Monitoring, Assessment, and Research Program's (CMARP) watershed team to develop the draft monitoring plan for the watershed program.

#### Miscellaneous Expenses/Administration:

<b>CALFED Recommended Level of Funding:</b>	<b>\$8,421,990</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$222,818</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$222,253</b>

#### 1) **Program Title:** Restoration Reserve

CALFED Recommended Level of Funding:	\$7,068,990
Total Funds Obligated Through December 31, 1998:	\$0
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** The Cost Share Agreement between the State of California and the United States related to Ecosystem Restoration Under Proposition 204 and the Bay-Delta

Act, calls for setting aside up to 5 percent of the available funds in a Restoration Reserve Fund for emergency and single-time expenditures. The Policy Group recommends that \$3.3 million of the FY 1998 Federal Bay-Delta Accounts be set aside for that purpose. Funds will be allocated to the U.S. Bureau of Reclamation and disbursed as determined by the Policy Group.

**First Quarter Accomplishments:**

Reclamation requested an increase of the Restoration Reserve for FY 1999 in the December 4, 1998 request to the Secretary. The total request for FY 1999 is \$3,750,000.

2) **Program Title:** Technical Review and Quality Control Program

CALFED Recommended Level of Funding:	\$553,000
Total Funds Obligated Through December 31, 1998:	\$0
Total Funds Expended Through December 31, 1998:	\$0

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** While each federal agency is required to monitor the schedule and budget of the activities they undertake with this appropriation, there is a need to have an efficient quality control program to monitor work products to ensure that deliverables are satisfactory. This program will provide the resources needed to technically review work products as needed for the projects.

**First Quarter Accomplishments:**

In a letter to the Secretary, dated December 4, 1998, Reclamation requested a total of \$1,047,000 for technical assistance for three projects (\$862,000 for the Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program; \$145,000 for the Watershed Restoration Planning and implementation Program; and \$40,000 for the Bay-Delta Education Program). Pending final approval<sup>9</sup>, funding will be allocated to the projects as described and deducted from the Technical Review Program/Quality Control Program. Reclamation also requested an increase of the Technical Review Program/Quality Control Program for FY 1999 projects in the same December 4, 1998 request to the Secretary. The total request for FY 1999 was \$750,000.

3) **Program Title:** Administrative Support Program

CALFED Recommended Level of Funding:	\$800,000
Total Funds Obligated Through December 31, 1998:	\$222,253
Total Funds Expended Through December 31, 1998:	\$222,253

**Funding provided to:** U.S. Bureau of Reclamation

**Project Description:** Funding is requested for support provided by the U.S. Bureau of Reclamation in coordinating funding activities with other Federal CALFED agencies from the Bay-Delta Ecosystem Restoration Appropriation.

**First Quarter Accomplishments:**

Reclamation requested \$500,000 in administrative support for FY 1999 in our December 4, 1998 letter to the Secretary<sup>10</sup>. Reclamation has utilized these funds during this quarter for the agreement negotiation process, preparation of this quarterly report, and support for Reclamation's CALFED Coordination Office.

**TOTAL FOR ALL CATEGORIES:**

<b>CALFED Recommended Level of Funding:</b>	<b>\$95,558,000</b>
<b>Total Funds Obligated Through December 31, 1998:</b>	<b>\$73,388,752</b>
<b>Total Funds Expended Through December 31, 1998:</b>	<b>\$6,424,470</b>

**Appendix B**

**BAY-DELTA ECOSYSTEM RESTORATION APPROPRIATION  
PROGRAM/PROJECT MAP INDEX**

Map

Locator   Program/Project

1	Anderson-Cottonwood Irrigation District Fish Passage
2	Assessment of Organic Matter in the Habitat and Its Relationship to the Food Chain
3	Bacterial Treatment of Selenium in the Panoche Drainage
4	Battle Creek Screens and Fish Passage
5	Bear Creek Floodplain Restoration Demonstration Project
6	Boeger Family Farm Screen
7	Butte Creek Watershed Road Survey
8	Cache Slough Habitat Enhancement
9	Cosumnes Floodplain Acquisition and Restoration
10	Evaluation of Selenium Sources, Levels, and Consequences in the Delta
	Fish Passage Program ( <i>Bay-Delta System-wide Program</i> )
1	ACID Fish Passage and Fish Screen Improvement Project, Phase II
11	American Basin Fish Screen and Habitat Improvement Project
12	Anadromous Fish Passage at Clough Dam on Mill Creek
6	Boeger Family Farms Fish Screen, Phase III: Construction
13	City of Sacramento Fish Screen Replacement Project, Phase II
9	Cosumnes River Salmonid Barrier Program
14	Fish Passage Improvement Project at the Red Bluff Diversion Dam

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<sup>10</sup> Approval of the December 4, 1998, request was provided by the Secretary's office on January 6, 1999.

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15	Hasting Tract Fish Screen, Phase II: Construction
16	Steelhead and Chinook Salmon Fish Passage Barrier Remediation-Guadalupe River
	Habitat Restoration/Flood Control Bypasses Program ( <i>Bay-Delta System-wide Program</i> )
17	Benicia Waterfront Marsh Restoration
18	Biological Restoration and Monitoring in the Suisun Marsh/North San Francisco Bay Ecological Zone
7	Butte Creek Acquisition
7	Butte Creek Riparian Restoration Demonstration
9	Cosumnes River Acquisition, Restoration, Planning and Demonstration
19	Deer and Mill Creeks Acquisition and Enhancement
20	Fern-Headreach Tidal Perennial Aquatic and Shaded River Aquatic Conservation Project
21	Floodplain Acquisition, Management, and Monitoring on the Sacramento River
22	Grayson River Ranch Perpetual Easement and Restoration
23	Hill Slough West Habitat Demonstration Project
24	Lower Clear Creek Floodway Restoration Project
25	Lower Mill Creek Riparian Restoration
26	Lower San Joaquin River Floodplain Protection and Restoration Project
27	Merced River Salmon Habitat Enhancement, Phase III
28	Nelson Slough Wildlife Area Restoration Demonstration Project
29	Petaluma Marsh Expansion Project - Marin County
30	Rhode Island Floodplain Management and Habitat Restoration
31	South Napa River Tidal Slough and Floodplain Restoration Project
31	South Napa River Wetlands Acquisition and Restoration Program
32	Stone Lakes National Wildlife Refuge Land Acquisitions
33	Inventory of Forest Road Systems, Cat Creek Watershed
34	Liberty Island Acquisition
35	Prospect Island Habitat Protection Project
36	Richter Brothers Screen
37	San Joaquin Floodplain Acquisition and Riparian Restoration
38	San Francisco Bay Area Wetlands Ecosystem Goals Project
39	Sand and Salt Creek Watershed Project
40	Sedimentation Movement and Availability, and Monitoring in the Delta
41	Stanislaus River Channel Restoration at the Williams Site
42	Tuolumne River Channel Restoration (Special Run Pool 9)
19	Watershed Improvement/Sediment Stabilization on Deer, Mill and Antelope Creeks
	Watershed Planning Program
43	Alhambra Creek Watershed CRMP Program
44	American River Integrated Watershed Stewardship Strategy
4	Battle Creek Watershed Stewardship
45	Cold Water Fisheries and Water Quality Element
46	Cottonwood Creek Watershed Group Formation
47	Local Watershed Stewardship: Steelhead Trout Plan
48	Lower Putah Creek Watershed Stewardship Program
27	Merced River Corridor Restoration Plan
29	Petaluma River Watershed Restoration Program
49	Proposal to Develop Local Watershed Stewardship Plan for the Lower Mokelumne River

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- 50 South Yuba River Coordinated Watershed Management Plan
- 51 Sulphur Creek Coordinated Resource Management Planning Group
- 52 Union School Slough Watershed Improvement Program
- 53 Watershed Restoration Strategy for the Yolo Bypass
- 54 Woodbridge Fish Screen and Passage

### Bay-Delta System-wide Programs/Projects:

- Bay-Delta Education Program
- Comprehensive and Coordinated Monitoring and Research Program
- Coordinated Permitting
- Development of a Watershed Management Program
- Environmental Water Acquisition Program
- Evaluation of Tagging Data
- Exotic species Control Program
- Floodplain Restoration/Habitat Restoration on Existing Conservation Lands Program
- Integrated Pest Management in Suisun Bay Program
- Integrated Phasing Strategy
- Small Diversion Fish Screens Program